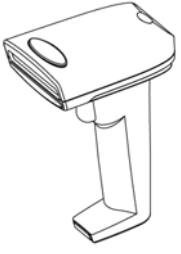
LONG RANGE CCD BAR CODE SCANNER

USER'S MANUAL



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1. Introduction

Thank you very much for purchasing TSC bar code scanner.
This decoder is a Long Range (Gun Type) CCD Bar Code Scanner. It works with variety of bar code types, reading devices and computer interface. This manual provides an easy way to setting the decoder by scanning bar codes listed on the menu.

Specifications, accessories, parts and programs are subject to change without notice.

1.1 Installation

• Unpacking

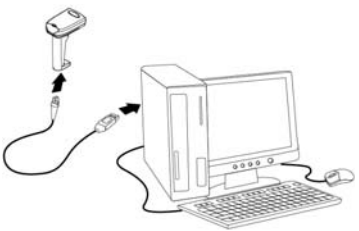
Unpacking the box, the following items are included in the carton.
* One scanner unit
* One quick start guide

If any parts are missing, please contact the Customer Service Department of your purchased reseller or distributor.

• Connecting the scanner

*** USB interface**

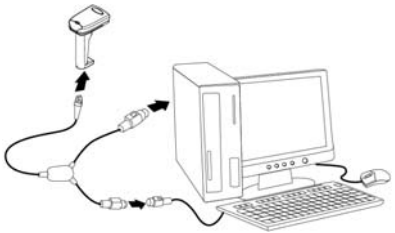
1. Turn off the power of terminal/computer.
2. Connect the USB cable to the scanner and the terminal/computer.
3. Turn the terminal/computer power on.
4. The scanner will beep a tone after connected.
5. Scan any bar code to ensure the scanner was completed setting.



*** Keyboard wedge interface (Option)**

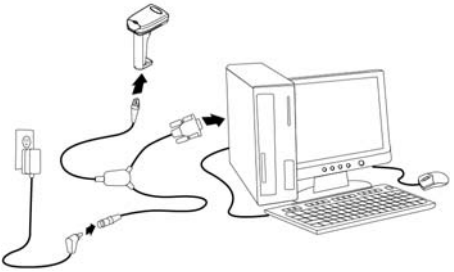
1. Turn off the power of terminal/computer.
2. Connect the appropriate interface cable to the scanner, the

terminal/computer and keyboard.
3. Turn the terminal/computer power on.
4. The scanner will beep a tone after connected.
5. Set the scanner to keyboard wedge setting. (Please refer to section 2.1)
6. Scan any bar code to ensure the scanner completed setting.



*** RS-232 interface (Option)**

1. Turn off the power of terminal/computer.
2. Connect the RS-232 cable to the scanner and the terminal/computer.
3. Turn the terminal/computer power on.
4. The scanner will beep a tone after connected.
5. Set the scanner to RS-232 setting. (Please refer to section 2.1)
6. Scan any bar code to ensure for completed setting.



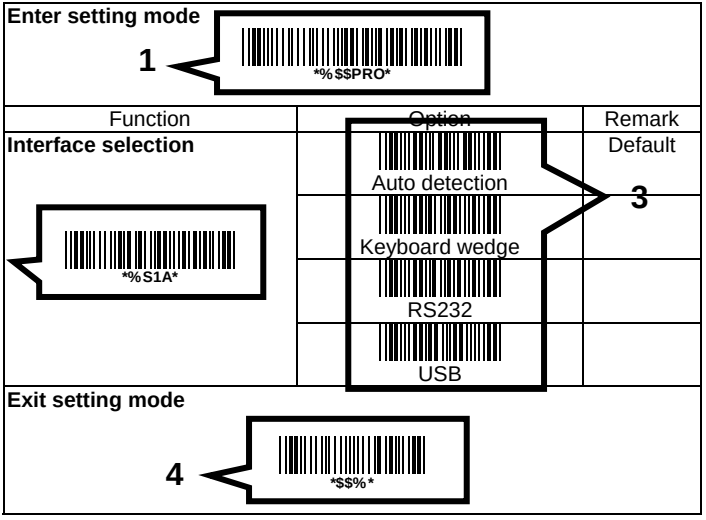
1.2 Default Setting

Code Type	Enable	Proprietary ID	AIM Code ID
Code 39	X	1	]A
Code 93		2	]G
Interleaved 2 of 5	X	3	]I
Industrial 2 of 5		4	]S
Standard 2 of 5		5	]R
Code 128	X	6	]C
Codabar	X	7	]F
EAN 8	X	8	]E
EAN 13	X	9	]E
UPC A	X	A	]E
UPC E	X	B	]E
MSI		C	]M
Plessey		D	]P
China Post		E	]X
Italian Pharmacode (Code 32)		F	]G
Matrix 2 of 5		G	]S
Telepen		H	]B
Code 11		I	]H

2. Setting Procedure
2.1 Common setting

Please follow below steps to set your scanner.

1. Scan the bar code from “Enter setting mode” side to start the setting procedure.
2. Select the bar code from “Function” side to enter the option mode.
3. Scan the bar code from “Option” side to set the option function.
4. Scan the bar code from “Exit setting mode” side when finished the setting.



2.2 Parameter setting

Please follow below steps to set parameter setting.

1. Scan the bar code from “Enter setting mode” side to start the setting procedure.
2. Select and scan the bar code from “Function” side to enter the option mode.
3. Scan the bar code from the parameter list that listed on back page of the manual to set the parameter.
4. Scan the bar code from “Exit setting mode” when finished the setting.

Enter setting mode

1

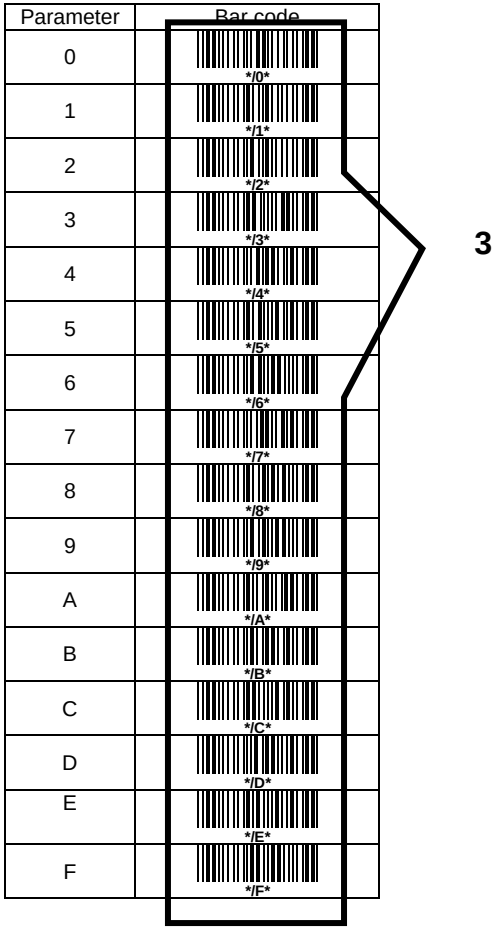
Function	Option	Remark
Stand-by duration	1~99 sec	6 (Default)
Double read timeout	1~99 (10 ms)	50 (Default)
Double confirm	0~9 times	0 (Default)
Global Min. code length	0~64	4 (Default)
Global Max. code length	0~64	63 (Default)

2

Exit setting mode

4

Parameter list (Listed on back page of the manual)



2.3 Interface Selection

Enter setting mode

%$$PRO

Function	Option	Remark
Interface selection *%S1A*	Auto detection	Default
	Keyboard wedge	
	RS232	
	USB	

Exit setting mode

$$%

● **Keyboard wedge**

Enter setting mode *%$$PRO*		
Function	Option	Remark
Keyboard type *%S2A*	IBM AT, PS/2	Default
	Reserved	
Keyboard layout *%S2B*	US international	Default
	Spanish	
	French	
	German	
	Italian	
	Danish	
	Portuguese	
	Swedish	
	Switzerland	
	UK	

	Latin American	
	Japanese	
	Hungarian	
	Reserved	
	Reserved	
Keyboard speed *%S2C*	0~8 (0: High speed; 8: Low speed)	3 (Default)
Caps lock *%S2D*	Caps lock “OFF”	Default
	Caps lock “ON”	
Power-on simulation *%S2E*	Disable	Default
	Enable	
Inter-character delay *%S2F*	0~99 (ms)	2 (Default)
Block transmission delay *%S2G*	0~99 (ms)	10 (Default)
Exit setting mode *$S%*		

- **RS232**

Enter setting mode

Function	Option	Remark
Flow control (Handshaking)	None	Default
	RTS/CTS	
	Xon/Xoff	
	ACK/NAK	
Baud rate	1200 bps	
	2400 bps	
	4800 bps	
	9600 bps	Default
	19200 bps	
	38400 bps	

	57600 bps	
	115200 bps	
Parity	None	Default
%S3C	Odd	
	Even	
Data bit	8 bits	Default
%S3D	7 bits	
Stop bit	1 bit	Default
%S3E	2 bits	
Exit setting mode		
$$%		

2.4 System setting

- **Scan**

Enter setting mode *%$$PRO*		
Function	Option	Remark
Scanning mode *%SAA*	Good-read off	
	Momentary	Default
	Alternate	
	Continue	
	Timeout off	
Stand-by duration *%SAB*	1~99 second(s)	6 (Default)
Double read timeout *%SAC*	1~99 (10 ms)	50 (Default)
Double confirm *%SAD*	0~9 times	0 (Default)
Global Min. code length *%SAE*	0~64	4 (Default)

Global Max. code length *%SAF*	0~64	63 (Default)
Inverted image scan *%SAG*	Disable	Default
	Enable	
Position indication *%SAH*	Disable	Default
	30 seconds	
	60 seconds	
	90 seconds	
	120 seconds	
	150 seconds	
	180 seconds	
	Enable	
Exit setting mode *$$%		

● **Indication**

Enter setting mode

Function	Option	Remark
Power on alert	Disable	
	Enable	Default
LED indication	Disable	
	Enable	Default
Beeper indication	Disable	
	Enable	Default
Beep loudness	0~7	7 (Default)
Beep tone frequency	0~99(100 Hz)	26 (Default)
Beep tone duration	0~99(ms)	10 (Default)

Exit setting mode

3. Code Option

• Code 39

Enter setting mode *%$$PRO*		
Function	Option	Remark
Read *%B1A*	 Disable	
	 Enable	Default
Check-sum verification *%B1B*	 Disable	Default
	 Enable	
Check-sum transmission *%B1C*	 Disable	Default
	 Enable	
Code ID setting *%B1D*	Hex 00-FF ASCII	1 (Default)
Max. code length *%B1E*	0-64	0 (Default)
Min. code length *%B1F*	0-64	0 (Default)
Truncate leading *%B1G*	0-15	0 (Default)

Truncate ending *%B1H*	0-15	0 (Default)
Start/End transmission *%B1J*	Disable	Default
	Enable	
Insert group number *%B1M*	00-44	00 (Default)
Format **(Standard Full ASCII)** *%B1R*	Disable	Default
	Enable	
Exit setting mode *$S%*		

• **Code 93**

Enter setting mode *%$$PRO*		
Function	Option	Remark
Read *%B2A*	Disable	Default
	Enable	
Check-sum verification *%B2B*	Disable	
	Enable	Default
Check-sum transmission *%B2C*	Disable	Default
	Enable	
Code ID setting *%B2D*	Hex 00-FF ASCII	2 (Default)
Max. code length *%B2E*	0-64	0 (Default)
Min. code length *%B2F*	0-64	0 (Default)
Truncate leading *%B2G*	0-15	0 (Default)
Truncate ending *%B2H*	0-15	0 (Default)
Insert group number *%B2M*	00-44	00 (Default)

Exit setting mode

• Interleaved 2 of 5

Enter setting mode *%$$PRO*		
Function	Option	Remark
Read *%B3A*	Disable	
	Enable	Default
Check-sum verification *%B3B*	Disable	Default
	Enable	
Check-sum transmission *%B3C*	Disable	Default
	Enable	
Code ID setting *%B3D*	Hex 00-FF ASCII	3 (Default)
Max. code length *%B3E*	0-64	0 (Default)
Min. code length *%B3F*	0-64	0 (Default)
Truncate leading *%B3G*	0-15	0 (Default)
Truncate ending *%B3H*	0-15	0 (Default)

Insert group number *%B3M*	00-44	00 (Default)
Exit setting mode *$S%*		

● **Industrial 2 of 5**

Enter setting mode *%$$PRO*		
Function	Option	Remark
Read *%B4A*	 Disable	Default
	 Enable	
Code ID setting *%B4D*	Hex 00-FF ASCII	4 (Default)
Max. code length *%B4E*	0-64	0 (Default)
Min. code length *%B4F*	0-64	0 (Default)
Truncate leading *%B4G*	0-15	0 (Default)
Truncate ending *%B4H*	0-15	0 (Default)
Insert group number *%B4M*	00-44	00 (Default)
Exit setting mode *$$%*		

- **Standard 2 of 5**

Enter setting mode *%$$PRO*		
Function	Option	Remark
Read *%B5A*	Disable	Default
	Enable	
Check-sum verification *%B5B*	Disable	Default
	Enable	
Check-sum transmission *%B5C*	Disable	Default
	Enable	
Code ID setting *%B5D*	Hex 00-FF ASCII	5 (Default)
Max. code length *%B5E*	0-64	0 (Default)
Min. code length *%B5F*	0-64	0 (Default)
Truncate leading *%B5G*	0-15	0 (Default)
Truncate ending *%B5H*	0-15	0 (Default)

Insert group number *%B5M*	00-44	00 (Default)
Exit setting mode *$S%*		

• **Code 128**

Enter setting mode *%$$PRO*		
Function	Option	Remark
Read *%B6A*	Disable	
	Enable	Default
Check-sum verification *%B6B*	Disable	
	Enable	Default
Check-sum transmission *%B6C*	Disable	Default
	Enable	
Code ID setting *%B6D*	Hex 00-FF ASCII	6 (Default)
Max. code length *%B6E*	0-64	0 (Default)
Min. code length *%B6F*	0-64	0 (Default)
Truncate leading *%B6G*	0-15	0 (Default)

Truncate ending *%B6H*	0-15	0 (Default)
Format *%B6R*	Standard	Default
	UCC/EAN-128	
Append *%B6I*	Disable	Default
	Enable	
UCC/EAN-128 ID setting *%B6Y*	Hex 00-FF ASCII	6 (Default)
Field separator code *%B6Z*	Hex 00-FF ASCII	1DH (Default)
Insert group number *%B6M*	00-44	00 (Default)
Exit setting mode *$$%*		

• CODABAR

Enter setting mode *%$$PRO*		
Function	Option	Remark
Read *%B7A*	Disable	
	Enable	Default
Check-sum verification *%B7B*	Disable	Default
	Enable	
Check-sum transmission *%B7C*	Disable	Default
	Enable	
Code ID setting *%B7D*	Hex 00-FF ASCII	7 (Default)
Max. code length *%B7E*	0-64	0 (Default)
Min. code length *%B7F*	0-64	0 (Default)
Truncate leading *%B7G*	0-15	0 (Default)

Truncate ending *%B7H*	0-15	0 (Default)
Start/End type *%B7S*	ABCD/ABCD	Default
	abcd/abcd	
	ABCD/TN*E	
	abcd/tn*e	
Insert group number *%B7M*	00-44	00 (Default)
Start/End transmission *%B7J*	Disable	Default
	Enable	
Exit setting mode *$$%*		

● **EAN 8**

Enter setting mode *%$$PRO*		
Function	Option	Remark
Read *%B8A*	 Disable	
	 Enable	Default
Check-sum transmission *%B8C*	 Disable	
	 Enable	Default
Code ID setting *%B8D*	Hex 00-FF ASCII	8 (Default)
Truncate leading *%B8G*	0-15	0 (Default)
Truncate ending *%B8H*	0-15	0 (Default)
Truncate leading zero *%B8K*	 Disable	Default
	 Enable	

Supplement digits *%B8O*	None	Default
	2 digits	
	5 digits	
	Auto detection	
Insert group number *%B8M*	00-44	00 (Default)
Exit setting mode *$$%*		

● **EAN13**

Enter setting mode *%$$PRO*		
Function	Option	Remark
Read *%B9A*	 Disable	
	 Enable	Default
Check-sum transmission *%B9C*	 Disable	
	 Enable	Default
Code ID setting *%B9D*	Hex 00-FF ASCII	9 (Default)
Truncate leading *%B9G*	0-15	0 (Default)
Truncate ending *%B9H*	0-15	0 (Default)
Truncate leading zero *%B9K*	 Disable	
	 Enable	Default

Supplement digits *%B9O*	None	Default
	2 digits	
	5 digits	
	Auto detection	
ISBN/ISSN *%B9T*	Disable	Default
	Enable	
Insert group number *%B9M*	00-44	00 (Default)
Exit setting mode *$$%*		

• UPCA

Enter setting mode *%$$PRO*		
Function	Option	Remark
Read *%BAA*	 Disable	
	 Enable	Default
Check-sum transmission *%BAC*	 Disable	
	 Enable	Default
Code ID setting *%BAD*	Hex 00-FF ASCII	A (Default)
Truncate leading *%BAG*	0-15	0 (Default)
Truncate ending *%BAH*	0-15	0 (Default)
Truncation/ Expansion *%BAL*	 None	
	 Not Send Zero	Default
	 Expand to EAN13	

Supplement digits *%BAO*	None	Default
	2 digits	
	5 digits	
	UCC/EAN 128	
	Auto detection	
Insert group number *%BAM*	00-44	00 (Default)
Exit setting mode *$$%*		

● **UPCE**

Enter setting mode

Function	Option	Remark
Read	Disable	
	Enable	Default
Check-sum transmission	Disable	
	Enable	Default
Code ID setting	Hex 00-FF ASCII	B (Default)
Truncate leading	0-15	0 (Default)
Truncate ending	0-15	0 (Default)
Supplement digits	None	Default
	2 digits	
	5 digits	
	UCC/EAN 128	
	Auto detection	

Insert group number *%BBM*	00-44	00 (Default)
Expansion *%BBN*	 Disable	Default
	 Enable	
UPCE-1 *%BBU*	 Disable	Default
	 Enable	
Exit setting mode *$$%*		

• MSI

Enter setting mode

%$$PRO

Function	Option	Remark
Read *%BCA*	Disable	Default
	Enable	
Check-sum verification *%BCB*	Disable	
	Mod 10	Default
	Mod 10/10	
	Mod 11/10	
Check-sum transmission *%BCC*	Disable	Default
	Enable	
Code ID setting *%BCD*	Hex 00-FF ASCII	C (Default)
Max. code length *%BCE*	0-64	0 (Default)
Min. code length *%BCF*	0-64	0 (Default)

Truncate leading *%BCG*	0-15	0 (Default)
Truncate ending *%BCH*	0-15	0 (Default)
Insert group number *%BCM*	00-44	00 (Default)
Exit setting mode *$S%*		

● **PLESSEY**

Enter setting mode *%$$PRO*		
Function	Option	Remark
Read *%BDA*	 Disable	Default
	 Enable	
Check-sum verification *%BDB*	 Disable	
	 Enable	Default
Check-sum transmission *%BDC*	 Disable	Default
	 Enable	
Code ID setting *%BDD*	Hex 00-FF ASCII	D (Default)
Max. code length *%BDE*	0-64	0 (Default)
Min. code length *%BDF*	0-64	0 (Default)
Truncate leading *%BDG*	0-15	0 (Default)

Truncate ending *%BDH*	0-15	0 (Default)
Insert group number *%BDM*	00-44	00 (Default)
Exit setting mode *$$%*		

• **China post**

Enter setting mode *%$$PRO*		
Function	Option	Remark
Read *%BEA*	 Disable	Default
	 Enable	
Code ID setting *%BED*	Hex 00-FF ASCII	E (Default)
Max. code length *%BEE*	0-64	11 (Default)
Min. code length *%BEF*	0-64	0 (Default)
Truncate leading *%BEG*	0-15	0 (Default)
Truncate ending *%BEH*	0-15	0 (Default)
Insert group number *%BEM*	00-44	00 (Default)

• Italian Pharmacode (CODE 32)

Enter setting mode *%$$PRO*		
Function	Option	Remark
Read *%BFA*	Disable	Default
	Enable	
Code ID setting *%BFD*	Hex 00-FF ASCII	F (Default)
Truncate leading *%BFG*	0-15	0 (Default)
Truncate ending *%BFH*	0-15	0 (Default)
Leading "A" *%BFP*	Disable	Default
	Enable	
Insert group number *%BFM*	00-44	00 (Default)
Exit setting mode *$$%*		

- **Matrix 2 of 5**

Enter setting mode *%$$PRO*		
Function	Option	Remark
Read *%BGA*	Disable	Default
	Enable	
Check-sum verification *%BGB*	Disable	Default
	Enable	
Check-sum transmission *%BGC*	Disable	Default
	Enable	
Code ID setting *%BGD*	Hex 00-FF ASCII	G (Default)
Max. code length *%BGE*	0-64	0 (Default)
Min. code length *%BGF*	0-64	0 (Default)
Truncate leading *%BGG*	0-15	0 (Default)

Truncate ending *%BGH*	0-15	0 (Default)
Insert group number *%BGM*	00-44	00 (Default)
Exit setting mode *$S%*		

● Telepen

Enter setting mode

%$$PRO

Function	Option	Remark
Read *%BHA*	Disable	Default
	Enable	
Check-sum verification *%BHB*	Disable	Default
	Enable	
Check-sum transmission *%BHC*	Disable	Default
	Enable	
Code ID setting *%BHD*	Hex 00-FF ASCII	H (Default)
Max. code length *%BHE*	0-64	0 (Default)
Min. code length *%BHF*	0-64	0 (Default)
Truncate leading *%BHG*	0-15	0 (Default)
Truncate ending *%BHH*	0-15	0 (Default)

Insert group Number *%BHM*	00-44	00 (Default)
Format *%BHR*	Numeric only	Default
	Full ASCII only	
Exit setting mode *$$%*		

• **CODE11**

Enter setting mode *%$$PRO*		
Function	Option	Remark
Read *%BIA*	 Disable	Default
	 Enable	
Check-sum verification *%BIB*	 Disable	
	 One digit	Default
	 Two digit	
Check-sum transmission *%BIC*	 Disable	Default
	 Enable	
Code ID setting *%BID*	Hex 00-FF ASCII	I (Default)
Max. code length *%BIE*	0-64	0 (Default)
Min. code length *%BIF*	0-64	0 (Default)
Truncate leading *%BIG*	0-15	0 (Default)

Truncate ending *%BIH*	0-15	0 (Default)
Insert group number *%BIM*	00-44	00 (Default)
Exit setting mode *$$%*		

4. String setting / Transmission

● Prefix/Suffix

<table>
<tr><td colspan="3">Enter setting mode

%$$PRO</td></tr>
<tr><td>Function</td><td>Option</td><td>Remark</td></tr>
<tr><td>Prefix characters setting

%SZA</td><td>Hex 00-FF ASCII
1-22 characters</td><td>None (Default)</td></tr>
<tr><td>Suffix characters setting

%SZB</td><td>Hex 00-FF ASCII
1-22 characters</td><td>0D0AH (Default)</td></tr>
<tr><td colspan="3">Exit setting mode

$$%</td></tr>
</table>

● **Preamble / Postamble**

Enter setting mode

%$$PRO

Function	Option	Remark
Preamble characters setting *%SYA*	Hex 00-FF ASCII 1-22 characters	None (Default)
Preamble transmission *%SYB*	Disable	Default
	Enable	
Postamble characters setting *%SYC*	Hex 00-FF ASCII 1-22 characters	None (Default)
Postamble transmission *%SYD*	Disable	Default
	Enable	

Exit setting mode

$$%

● **Insert Group Character**

Enter setting mode

Function	Option	Remark
Insert G1 characters setting	Hex 00-FF ASCII 1-22 characters	None (Default)
Insert G2 characters setting	Hex 00-FF ASCII 1-22 characters	None (Default)
Insert G3 characters setting	Hex 00-FF ASCII 1-22 characters	None (Default)
Insert G4 characters setting	Hex 00-FF ASCII 1-22 characters	None (Default)
Insert data group 1 position	00-63	00: no insertion (Default)
Insert data group 2 position	00-63	00: no insertion (Default)
Insert data group 3 position	00-63	00: no insertion (Default)
Insert data group 4 position	00-63	00: no insertion (Default)

Exit setting mode

• **Others**

Enter setting mode *%$$PRO*		
Function	Option	Remark
Code ID position *%SWA*	 Before code data	Default
	 After code data	
Code ID transmission *%SWB*	 Disable	Default
	 Proprietary ID	
	 AIM ID	
Code length transmission *%SWC*	 Disable	Default
	 Enable	
Code name transmission *%SWD*	 Disable	Default
	 Enable	
Case conversion *%SWE*	 Disable	Default
	 Upper case	
	 Lower case	
	For barcode data only	

Exit setting mode

5. Scanner configuration / Reset to default settings

Enter setting mode

%$$PRO

Function	Description
Barcode standard parameter list *%LP1*	After scan this barcode, the host terminal/computer will display barcode standard parameter list of the scanner.
Unique parameter list *%LP2*	After scan this barcode, the host terminal/computer will display unique parameter list of the scanner.
System parameter list *%LP3*	After scan this barcode, the host terminal/computer will display system parameter list of the scanner.
String setting list *%LP4*	After scan this barcode, the host terminal/computer will display string setting list of the scanner.
Firmware version *%LFV*	After scan this barcode, the host terminal/computer will display firmware version of the scanner.
Reset to default settings *%RES*	Initialize the scanner and restore the settings to factory default.

Exit setting mode

$$%

Parameter list

Parameter	Bar code
0	*/0*
1	*/1*
2	*/2*
3	*/3*
4	*/4*
5	*/5*
6	*/6*
7	*/7*
8	*/8*
9	*/9*
A	*/A*
B	*/B*
C	*/C*
D	*/D*
E	*/E*
F	*/F*

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